

**BEFORE THE TENNESSEE REGULATORY AUTHORITY  
NASHVILLE, TENNESSEE**

**September 23, 1999**

**IN RE:**

**NASHVILLE GAS COMPANY  
WEATHER NORMALIZATION  
ADJUSTMENT AUDIT**

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**DOCKET NO.99-00514**

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**ORDER ADOPTING WNA AUDIT REPORT OF AUTHORITY'S STAFF**

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This matter came before the Tennessee Regulatory Authority (the "Authority") at a regularly scheduled Authority Conference held on August 24, 1999, for the consideration of the audit findings of the Authority's Energy and Water Division (the "Staff") after review of Nashville Gas Company's ("NGC") Weather Normalization Adjustment (WNA) for the period November 1, 1998, through March 31, 1999. The WNA Audit Report, attached hereto as Exhibit A, contains the audit findings of the Staff, the responses thereto of NGC, and the recommendations of the Staff in addressing its findings. The difference between NGC's Weather Normalization Adjustment and the Staff's audit results is a net under-collection of \$28,622. NGC has agreed to include this amount in its Actual Cost Adjustment Account.

After consideration of the WNA Audit Report, the Authority unanimously approved the findings and recommendations contained therein.

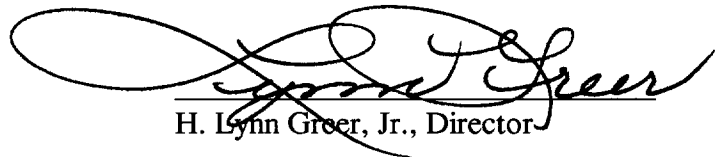
**FILE**

**IT IS THEREFORE ORDERED THAT:**

1. The WNA Audit Report is approved, including the findings and recommendations contained therein.

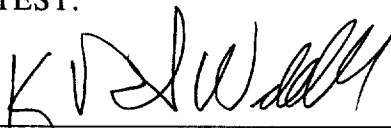
2. Any party aggrieved by the Authority's decision in this matter may file a Petition for Reconsideration with the Authority within ten (10) days from the date of this Order.

  
Melvin J. Malone, Chairman

  
H. Lynn Greer, Jr., Director

  
Sara Kyle, Director

ATTEST:

  
K. David Waddell, Executive Secretary

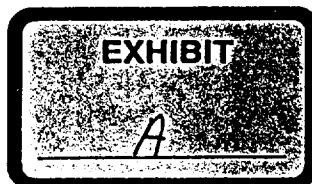
COMPLIANCE AUDIT REPORT  
OF  
NASHVILLE GAS COMPANY  
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER  
DOCKET NO. 99-00514

PREPARED BY

TENNESSEE REGULATORY AUTHORITY

ENERGY AND WATER DIVISION

AUGUST, 1999



**COMPLIANCE AUDIT  
NASHVILLE GAS COMPANY  
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER**

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**COMPLIANCE AUDIT**  
**NASHVILLE GAS COMPANY**  
**WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER**

**I. OBJECTIVE OF AUDIT**

In its September 26, 1991 Order in Docket 91-01712, the Tennessee Regulatory Authority (TRA), formerly the Tennessee Public Service Commission, approved a three year experimental Weather Normalization Adjustment (WNA) Rider to be applied to residential and commercial customers' bills during the months of October through May of each year (See Attachment 1). In its June 21, 1994 order, the TRA adopted the WNA Rider as a permanent rule, to be applied November through March of each year for Nashville Gas Company. The purpose of this audit is to determine if the WNA rider was calculated and applied to customers' bills correctly between November 1, 1998 and March 31, 1999.

**II. SCOPE OF AUDIT**

In meeting the objective of the audit, the Staff compared the following on a daily basis: 1) the Company's actual heating degree days to National Oceanic and Atmospheric Administration (NOAA) actual heating degree days; 2) the Company's normal heating degree days to the normal heating degree days calculated in the last rate case; and 3) the Company's calculation of the WNA factor to Staff's calculation. The Staff also audited a sample of customers' bills during the WNA period to verify that the WNA factor had been correctly applied to the bills.

This audit was conducted by Pat Murphy of the Energy and Water Division.

**III. BACKGROUND ON WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER**

In setting rates, the Tennessee Regulatory Authority uses a normalized level of revenues and expenses for a test year, which is designed to be the most reasonable estimate of the Company's operations during the time the rates are to be in effect. Use of normalized operating levels eliminates unusual fluctuations that may occur during the test period, which causes rates to be set too high or too low.

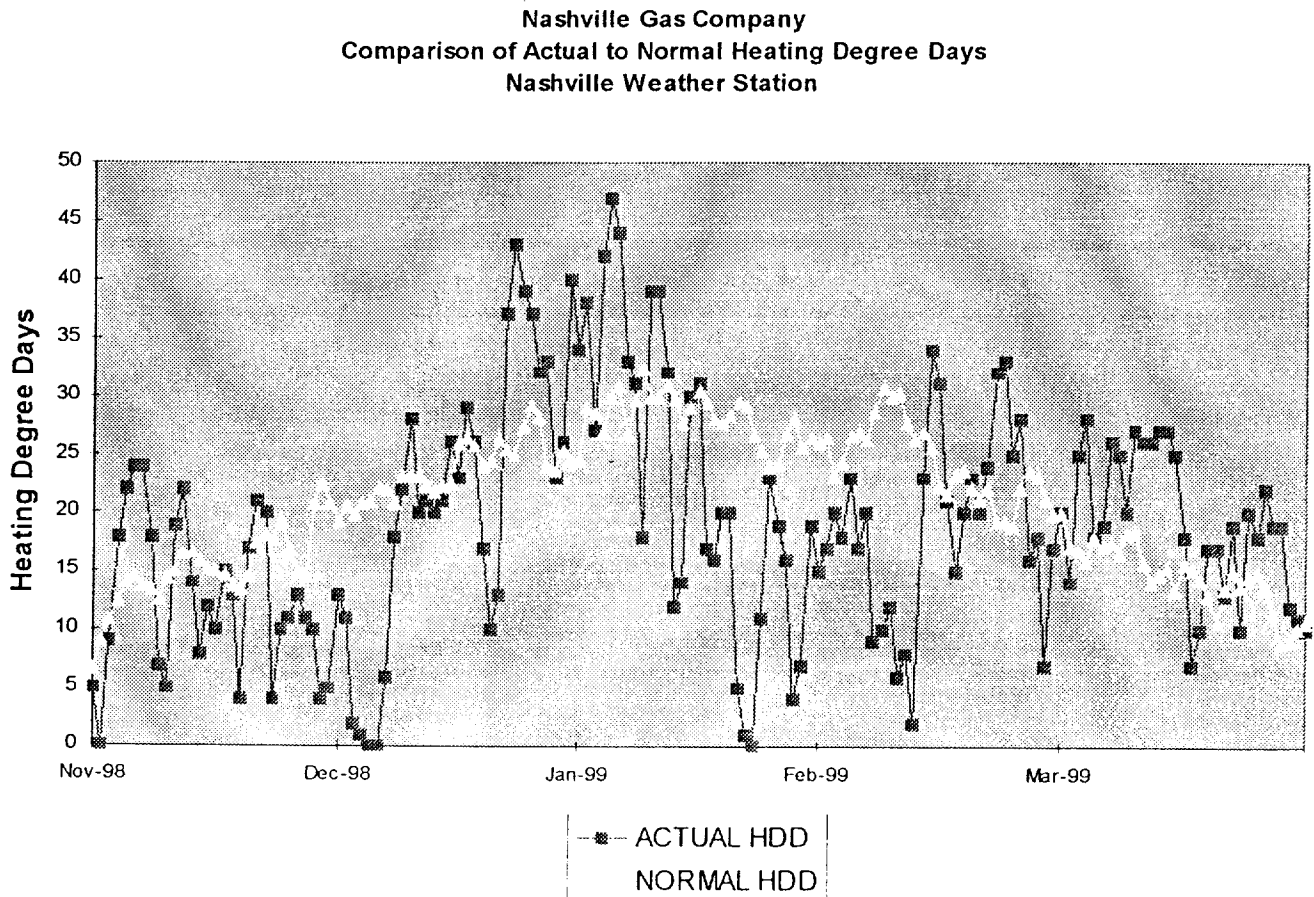
Specifically, one part of normalizing revenues consists of either increasing or decreasing the test year weather related sales volumes to reflect the difference between the normal and actual heating degree days. (A heating degree day is calculated as the difference in the average daily temperature and 65 degrees Fahrenheit.) This average daily temperature constitutes normal weather and is determined based on the previous thirty years weather data.

However, normal weather rarely occurs. This has two impacts:

- 1) The customers' bills fluctuate dramatically due to changes in weather from month to month; and
- 2) The gas companies earn more or less than their authorized rate of return. For example, if weather is colder than normal, then more gas than anticipated in the rate case will be sold. This results in higher customer bills and overearnings for the company. On the other hand, if weather is warmer than normal, less gas than anticipated in the rate case will be sold, the customers' bills will be lower and the company will underearn.

In recognition of this fact, the TRA approved an experimental WNA mechanism, which became permanent on June 21, 1994, to reduce the impact abnormal weather has on the customers' bills and on the gas utilities' operations. In periods of weather colder than normal, the customer receives a credit on his bill, while in periods of warmer than normal weather, the customer is billed a surcharge. Thus, customers' monthly bills should not fluctuate as dramatically and the gas company should have a more stable rate of return.

The following graph is a comparison of actual heating degree days to normal heating degree days for Nashville Gas during the 1998 - 1999 heating season.



#### IV. IMPACT OF WNA RIDER

The net impact of the WNA Rider during the November 1, 1998 through March 31, 1999 period was that residential and commercial customers were **surcharged** an additional \$2,858,841 and \$1,702,798 respectively. This equates to increases in revenues from residential and commercial sales of 6.66% and 4.94% respectively. (See Table 1) This is an increase from the previous year when the residential and commercial customers were **surcharged** \$898,107 and \$622,766 respectively (See Table 2).

Table 1

#### **Impact of WNA Rider on Residential & Commercial Revenues November 1, 1998 - March 31, 1999**

	<u>WNA Rider Revenues</u>	<u>Total Revenues</u>	<u>Percentage Impact of WNA Rider On Revenues</u>
Residential Sale	\$ 2,858,841	\$ 42,933,541	6.66%
Commercial Sales	<u>1,702,798</u>	<u>34,480,386</u>	4.94%
Total	<u>\$ 4,561,639</u>	<u>\$ 77,413,927</u>	5.89%

Table 2

#### **Amount Surcharged (Refunded) 1996 - 1999**

	<u>Residential</u>	<u>Commercial</u>	<u>Total Surcharge/(Refund)</u>
11/96-3/97	\$1,530,799	\$1,086,647	\$2,617,446
11/97-3/98	898,107	622,766	1,520,873
11/98-3/99	<u>2,858,841</u>	<u>1,702,798</u>	<u>4,561,639</u>
Total	<u>\$5,287,747</u>	<u>\$3,412,211</u>	<u>\$8,699,958</u>

## **V. BACKGROUND INFORMATION ON THE COMPANY**

Nashville Gas Company (NGC), with its headquarters at 655 Mainstream Drive, Nashville, Tennessee, is a wholly owned subsidiary of Piedmont Natural Gas Company, which has its headquarters at 1915 Rexford Road, Charlotte, North Carolina. NGC is a gas distributor, which provides service to several communities in the Middle Tennessee area. The natural gas used to serve these areas is purchased from Tennessee Gas Pipeline, Columbia Gas Transmission Corporation and Texas Eastern Gas Pipeline in accordance with separate and individual tariffs approved by the Federal Energy Regulatory Commission.



## **VI. WNA FINDINGS**

The Staff's audit results showed an **under-recovery** from NGC's ratepayers in the amount of **\$28,622** for the period. This under-recovery resulted from a single finding, which is detailed below.

### **FINDING:**

#### **Exception**

The Company used inaccurate actual daily heating degree days in the calculation of the WNA factor.

#### **Discussion**

The audit indicates that on two (2) days out of 182 days of weather observations in the WNA period, the Company used inaccurate actual daily heating degree days in the calculation of the WNA factor. This inaccuracy was due to the daily degree days published in NOAA's Local Climatological Data for Nashville being different from the daily degree days that the Company obtained for this particular day from a NOAA Internet site. Since the official NOAA publication, which is the standard in the TRA's audit of the Weather Normalization Adjustment, has a lag time of several months, the Company must rely on data that is immediately available. Through no fault of the Company, they relied on information from NOAA that later proved to be inaccurate.

The days involved were:

Date	Daily Degree Days Used By Company	Daily Degree Days As Published by NOAA	Degree Day Difference
01/04/99	47	46	-1
02/16/99	15	14	-1

The net result of the Company's use of this inaccurate information is that the customers were **under-charged \$28,622**.

#### **Company Response**

The Company agrees with the finding.

## **II. RECOMMENDATIONS AND CONCLUSIONS**

The Staff concludes that the Company is correctly implementing the mechanics of the WNA Rider as specified by the TRA and included in the Company's tariff. (See Attachment 1) Since the **\$28,622 under-collection** is immaterial (approximately \$0.21 per customer), we recommend that the Company include this amount in its Actual Cost Adjustment Account. The Company has agreed to do so.

## SERVICE SCHEDULE NO. 13 Weather Normalization Adjustment (WNA) Rider

### I. Provision for Adjustment

The base rates per therm (100,000 Btu) for gas service set forth in any rate schedules utilized by the Commission in determining normalized test period revenues shall be adjusted by an amount hereinafter described, which amount is referred to as the "Weather Normalization Adjustment".

The Weather Normalization Adjustment will be applicable for bills rendered on and after November 1 and continuing through the final billing cycle in March of each year.

### II. Definitions

For the purposes of this Rider:

"Commission" means the Tennessee Public Service Commission.

"Relevant Rate Order" means the final order of the Commission in the most recent litigated rate case of the Company fixing the rates of the Company or the most recent final order of the Commission specifically prescribing or fixing the factors and procedures to be used in the application of this Rider.

### III. Computation of Weather Normalization Adjustment

The Weather Normalization Adjustment shall be computed to the nearest one-hundredth cent per therm by the following formula:

$$WNA_i = R_i * \frac{(HSF_i(NDD-ADD))}{(BL_i + (HSF_i \times ADD))}$$

Where:

$i =$  any particular rate schedule or billing classification within any particular rate schedule that contains more than one billing classification.

$WNA_i =$  Weather Normalization Adjustment Factor for the  $i^{\text{th}}$  rate schedule or classification expressed in cents per therm.

$R_i =$  weighted average base rate (base rate less any embedded gas cost) of temperature sensitive sales for the  $i^{\text{th}}$  schedule or classification utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.

- $HSF_i$  = heat sensitive factor for the  $i^{th}$  schedule or classification utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.
- $NDD$  = normal billing cycle heating degree days utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.
- $ADD$  = actual billing cycle heating degree days.
- $BL_i$  = base load sales for the  $i^{th}$  schedule or classification utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.

IV. Filing with Commission

The Company will file as directed by the Commission (a) a copy of each computation of the Weather Normalization Adjustment, (b) a schedule showing the effective date of each such Weather Normalization Adjustment, and (c) a schedule showing the factors or values derived from the Relevant Rate Order used in calculating such Weather Normalization Adjustment.

1st Revised Addendum to TRA Service Schedule No. 13

NASHVILLE GAS COMPANY  
WNA Components

	<u>Residential</u>	<u>Commercial</u>
"R" Value:	0.29884	0.32596
Heat Sensitivity Factor:	0.20232	0.82050
Base Load:	14.24667	136.47892

ISSUED BY : John H. Maxheim  
ORIGINALLY ISSUED ON : May 31, 1996 to be effective June 30, 1996  
REISSUED ON: December 31, 1996 to be effective January 1, 1997

EFFECTIVE: January 1, 1997  
DOCKET NO: 96-00977